REMARKS

Double Patenting

It should be noted that the limitations of claim 29, as amended, differ from the limitations of claim 1, and therefore, no double patenting is present.

Claim Rejections under 35 U.S.C. § 112

Claims 1 and 17 have been amended to include wording from the preamble into the determining step of claims 1 and 17 regarding "the relationships".

Response to Claim Rejections Under 35 U.S.C. § 102(b)

The following issue is presented: Whether claims 1-3, 5, 7-14, 16-19 and 21-36 are anticipated under 35 U.S.C. § 102(b) by Aslam et al (Aslam, Javed; Pelekhov, Katya; Rus, Daniela; Static and Dynamic Information Organization with Star Clusters, 1998, Department of Computer Science, Dartmouth College, Hanover, NH, 10 pages)? If examination at the initial stage does not produce a prima facie case of unpatentability, then without more, the applicant is entitled to the grant of the patent. See *In re Oetiker*, 977 F. 2d 1443 (Fed. Cir. 1992). Under 35 U.S.C. § 102, anticipation requires that there is no difference between the claimed invention and reference disclosure, as viewed by a person of ordinary skill in the field of the invention. See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. In deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly

anticipating reference. See Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452.

In the present case, the Office asserts that Applicants' claims 1-3, 5, 7-14, 16-19 and 21-36 are set forth in Aslam. As more fully set forth below, Applicants contend that the findings on anticipation by the Office are clearly erroneous based on a failure to identify the elements of the claims, to determine their meaning in light of the specification, and to identify corresponding elements disclosed in the allegedly anticipating reference of Aslam. Applicants contend that the Office has not shown the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. Therefore, the rejection of these claims should be withdrawn.

It should be noted that there are significant differences between Applicants' claimed invention and the Aslam reference. (1) Applicants' claimed invention relies on prior knowledge of a user for selecting source and target documents, identified in an autolink command, to be ranked according to similarity using unique features of a similarity search engine for determining similarity relationships between source and target documents located in remote disparate databases. Applicants' claimed similarity search engine is incorporated into Applicants' invention by reference. (2) As claimed by Applicants', the similarity search engine includes the use of remote similarity search agents that are located in remote disparate databases for determining document attribute scoring, and only transmitting a search result back to Applicants' link analysis server rather than a complete set of documents as described in Aslam. This feature eliminates the requirement of accessing and uploading all documents to a server, as described in Aslam. (3) These remote search agents, or user defined functions, are

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downloaded to and reside in the database management systems and determine similarity relationships between documents by use of deterministic algorithms, as compared to the statistical or probabilistic methods such as clustering and the cosine normalization weighting scheme for indexing documents, as described in the Aslam reference. Applicants' similarity search engine makes use of deterministic algorithms by remote similarity search agents that determine document attribute similarities using user-designated measure algorithms, sum up intermediate node similarities using weighting algorithms, and aggregate document level similarity scores using choice algorithms. It is therefore only necessary to transmit the similarity search scores from remote disparate databases to a similarity search server or link analysis server, without the necessity of retrieving entire source and target documents from the remote disparate databases to the similarity search server or link analysis server. The resultant similarity scores are used for identifying similar documents without the use of clustering algorithms as described in the Aslam reference.

The Aslam reference discloses a method for information organization that relies on a probabilistic (as opposed to a deterministic) star clustering algorithm that is based graph theory, and particularly a similarity graph, for determining relationships between clusters of information. The Aslam references discloses a Smart search engine with a cosine normalization weighting scheme for indexing documents, which has been enhanced to compute a document to document similarity matrix for a set of retrieved documents. There is no teaching in Aslam of determining similarity scores between source and target documents by a remote similarity search server and associated remote similarity search agents located in disparate databases, which eliminates the requirement for

retrieving documents for determining similarity scores. The Aslam reference relies on the Smart system to compute a similarity matrix based on cosine normalization weighting for a set of retrieved documents. The bulk of the system described in the Aslam reference is a method for organizing information using graphical clustering methods, and has no basis for rejecting the claims of Applicants' disclosure. Since the Office has failed to establish that there is no difference between the Applicants' claimed invention and the reference of Aslam, the Applicants requests withdrawal of the rejections and reconsideration of the patent with respect to the above-referenced claims.

Claim Rejections of Independent Claims 1, 17 and 29 Under 35 U.S.C. § 102(b)

While the Aslam reference discloses a Smart system to compute a similarity matrix based on cosine normalization weighting for a set of retrieved documents, there is little or no similarities between the result produced by Applicants' claimed invention and the result produced by the method disclosed in the Aslam reference. The method used between the initiation and result of the two disclosures are patentably distinct from one another. This is evidenced by the fact that every element of Applicants claimed invention, arranged as in the claims, is not found in the Aslam reference cited by the Office.

Preamble: Turning to the preamble of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, a method or system "for automatically analyzing relationships between target and source documents..." Note that where a preamble recites a structural limitation, such as "automatically analyzing relationships", the Patent Office and courts give effect to that

usage. There is no teaching in Aslam of automatically analyzing relationships between target and source documents. The Aslam relies on clustering of all documents and does not distinguish between source and target documents, whereas Applicants' invention requires that source and target documents be specified prior to a similarity search, thus eliminating the requirement for the clustering methodology disclosed by Aslam. The cited passage by the Office of p 2, col.2 lines 13-21 of Aslam teaches representing information by a similarity graph, where vertices of the graph correspond to documents and each weighted edge in the graph corresponds to a measure of similarity between the two documents. The cosine metric in the vector space model of the Smart system is used to measure similarity between two documents. There is no such disclosure in Applicants specification. The Aslam reference teaches away from Applicants' disclosed similarity search method that determines similarity scores by remote search agents located in disparate databases based on similarity scores between attributes of target and source documents.

First Claim Limitation: Turning to the first limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, "receiving an autolink command by a link analysis server from an application program, the autolink command identifying a link analysis profile, source documents and target documents". There is no teaching in Aslam of receiving an autolink command by a link analysis server. The cited passage by the Office of p. 2, col. 1 line 58 through p. 2 col.2 line 2 of Aslam teaches a system for assisting users with deciding how to browse a database of free text documents by highlighting relevant topics and irrelevant subtopics by clustering data for narrowing the database over which detailed queries may be

formulated. As a post-processor the system classifies the retrieved data into clusters that capture topic categories and subcategories. The online algorithm may be used for constructing self-organizing information systems for routing problems, for topic detection and for topic tracking. With Applicants' disclosed system, the source and target documents are defined by a user, and are not required to be categorized by the system. Contrary to the assertion and interpretation by the Office, the submit command is not equivalent to the first limitation of claims 1 and similar independent claims 17 and 29. There is no teaching in this Office citation of the first limitation of Applicants' claims 1, 17 and 29 of "receiving an autolink command by a link analysis server from an application program, the autolink command identifying a link analysis profile, source documents and target documents", as disclosed and claimed in Applicants' specification. Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Second Claim Limitation: Turning to the second limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, "accessing the processing profile identified in the autolink command". There is no teaching in Aslam of accessing a processing profile identified in an autolink command. The cited passage by the Office of p 5, col.1 lines 1-8 of Aslam teaches allowing users to input queries by typing free text, while having a choice of specifying several corpora. The Smart system is invoked to produce a ranked list of the top most relevant documents, titles, locations and document-to-document similarity information. There is no relevance between this citation and Applicants' claims 1, 17 and 29, and there is no relationship of user input queries, typing free text, or choosing

from several corpora to any functions in Applicants' disclosure. There is no teaching in this citation of Applicants' accessing the processing profile identified in the autolink command, as found in the second limitation of Applicants' claims 1, 17 and 29.

Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Third Claim Limitation: Turning to the third limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, "accessing source and target document data identified in the autolink command". There is no teaching in Aslam of accessing source and target document data in an autolink command. Furthermore, there is no disclosure anywhere in the Aslam reference of source and target documents. In Applicants' disclosure, these source and target documents must be specified by a user. The cited passage by the Office of p 5, col.1 lines 1-8 of Aslam teaches allowing users to input queries by typing free text, while having a choice of specifying several corpora. The Smart system is invoked to produce a ranked list of the top most relevant documents, titles, locations and document-todocument similarity information. There is no relevance between this citation and Applicants' claims 1, 17 and 29, and there is no relationship of user input queries, typing free text, or choosing from several corpora to any functions in Applicants' disclosure. There is no teaching in this citation of the third limitation of Applicants' claims 1, 17 and 29. Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Fourth Claim Limitation: Turning to the fourth limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which

recite, "determining similarity scores between the source and target documents by a similarity search server and associated remote similarity search agents located in remote disparate databases". There is no teaching in Aslam of determining similarity scores between the source and target documents by a similarity search server and associated remote similarity search agents located in remote disparate databases. The cited passage by the Office in the Aslam reference of page 4, section 2.3, first paragraph, recites a system for organizing information that uses the star algorithm, consisting of an augmented version of the Smart system, a user interface and an implementation of the star algorithm. To index documents, the system uses the Smart search engine with a cosine normalization weighting scheme, enhanced to compute a document to document similarity matrix for a set of retrieved documents or a whole collection. The similarity matrix is used to compute clusters and to visualize clusters. There is no disclosure in this cited passage of the Aslam reference of a plurality of databases or of Applicants' fourth limitation of claims 1, 17 and 29. Applicants claimed invention does not require documents to be retrieved, nor a search engine with a cosine normalization weighting scheme, enhanced to compute a document to document similarity matrix. There is no teaching Aslam of the fourth limitation of Applicants' claims 1, 17 and 29. Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Fifth Claim Limitation: Turning to the fifth limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, "performing a link analysis for automatically identifying relationships between target and source documents based on comparing the similarity scores between the target and

source documents". There is no teaching in Aslam of performing a link analysis for automatically identifying relationships between target and source documents based on comparing the similarity scores between the target and source documents. The cited passage by the Office of p 5, col.1 lines 1-13 of Aslam teaches allowing users to input queries by typing free text, while having a choice of specifying several corpora. The Smart system is invoked to produce a ranked list of the top most relevant documents, titles, locations and document-to-document similarity information. The similarity information for the entire collection or for the collection computed by the query engine is provided as input to the star algorithm, which returns a list of clusters and marks their centers. There is no relevance between this citation and Applicants' claims 1, 17 and 29, and there is no relationship of user input queries, typing free text, choosing from several corpora, star algorithm or clusters to any functions in Applicants' disclosure. There is no relevance between this citation and Applicants' claims 1, 17 and 29, and there is no teaching in this citation of automatically identifying relationships between target and source documents based on comparing similarity scores. There is no teaching in this citation of the fifth limitation of Applicants' claims 1, 17 and 29. Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Sixth Claim Limitation: Turning to the sixth limitation of Applicants' independent claim 1, as amended, and similar independent claims 17 and 29, as amended, which recite, "sending a response containing a link analysis result identifying the relationships to the application program". There is no teaching in Aslam of sending a link analysis result for identifying relationships to an application program. The cited passage by the

Office of the screenshot on the bottom of Figure 3 of Aslam merely teaches ranking results of a query that appears to be a ranking of relevant documents. There is no relevance between this citation and the link analysis results, as disclosed in Applicants' disclosure. There is no teaching in this citation of identifying relationships based on comparing similarity scores. There is no teaching in this citation of the sixth limitation of Applicants' claims 1, 17 and 29. Therefore, there is no anticipation under 35 U.S.C. § 102(b) and Applicants request that the claim rejection be withdrawn.

Claim Rejections of Dependent Claims 2-16, 18-28, and 30-36 Under 35 U.S.C. §§ 102(b) and 103(a)

Applicants' dependent claims 2-16, 33 and 34 depend on independent 1, Applicants' dependent claims 18-28, 35 and 36 depend on independent claim 17, and Applicants' dependent claims 30-32 depend on independent claim 29. These dependent claims incorporate all the limitations of independent claims 1, 17 and 29 upon which they depend while providing further unique and non-obvious recitations. Since the Office has not established a *prima facie* case of anticipation for independent claims 1, 17 and 29, as shown above, a *prima facie* case of anticipation and obviousness has also not been established for dependent claims 2-16, 18-28, and 30-36. Since the rejections of claims 1, 17 and 29 are not supported by the Aslam reference, the rejections of these dependent claims, that depend on claims 1, 17 and 29, as being anticipated or obvious are also not supported by the Aslam, Apte and Lam references and should be withdrawn. Applicants request withdrawal of the rejections of these claims, and further examination and allowance of these dependent claims.

In addition, concerning claims 2 and 18, there is no teaching in the Aslam reference of receiving an autolink command by a link analysis server from a user interface program connected to the link analysis server, where the autolink command_identifies a processing profile, source documents and target documents.

Concerning claims 3 and 23, there is no teaching in the Aslam reference of a processing profile further comprising identifying an options element, identifying a threshold limit element defining a path to threshold limit values, identifying a mapping element for defining mappings between source and target document data, identifying an output element for defining output attributes including detail level 1, detail level 2, detail level 3, detail level 4, persistence level 1, persistence level 2, persistence level 3, and persistence level 4, and identifying a datasource element for defining a persistence data source. The various and diverse citations by the Office in the Aslam require a stretched interpretation and do not comport with the requirement of "the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim".

Concerning claim 4, there is no teaching in the Aslam or Apte references of identifying an options element that further comprises specifying a stop-on-count attribute, specifying an analysis-type attribute, including single, multiple and group values, specifying a count-type attribute, including match-count, statistical and threshold, specifying a minimum and maximum number of document links to be found, specifying threshold limits for defining ranges of similarity scores for indicating linked relationships, including attributes greater-than, greater-than-and-equal-to, less-than, less-than-and-equal-to, equal-to, and not-equal-to, and specifying scoring aggregation

options, including attributes include-minimum, include-maximum, and average-top-N-scores. The citations in the Apte reference are in regard to a clustering method, and are not found in any of Applicants' claims, since there is no requirement in Applicants' claims for organizing information into clusters. There is no relationship between the citations in the Apte reference and Applicants' claim 4.

Concerning claims 5 and 19, there is no teaching in the Aslam reference of accessing a processing profile that comprises accessing a processing profile embedded inline in the autolink command. Contrary to the assertion and interpretation by the Office, there is no requirement for a "query" to include a processing profile embedded in an autolink command, as found in Applicants' disclosure, or to read on an autolink command.

Concerning claims 6, 15 and 20, there is no teaching in the Aslam or Lam references of a processing profile that comprises accessing a processing profile from a persistence database, where the processing profile includes identifying an options element, a threshold limit element, a mapping element, an output element and a datasource element, as disclosed in Applicants' claims. Merely accessing a stored link, as disclosed in the Lam reference, does not equate to accessing a processing profile, as disclosed in claims 6 and 20 of Applicants' disclosure. Nor does a "link that can be later used to effect payment to the proper address as stored in the global database", as found in the Lam reference, equate to "storing the response containing the link analysis result in a persistence database", as found in claim 15 of Applicants' disclosure.

Concerning claim 7, there is no teaching in the Aslam reference of the source document data comprising an inline designation attribute, one or more source document

key attributes, a no-source attribute for indicating target documents are compared to each other, a query attribute, a database attribute, a cache designation attribute, and a block size attribute. The passage cited by the Office of page 5, column 1, lines 1-3 of Aslam is not equivalent to Applicants' claim 7.

Concerning claim 8, there is no teaching in the Aslam reference of accessing source document data embedded inline in the autolink command. The passage cited by the Office of page 5, column 1, lines 2-3 of Aslam regarding the term "corpora" is not equivalent to Applicants' claim 8.

Concerning claim 9, there is no teaching in the Aslam reference of accessing source document data from a similarity search server by issuing a query command to the similarity search server from the link analysis server. The passage cited by the Office of page 4, column 2, line 7 through page 5, column 1, line 2 of Aslam regarding user inputting free text user queries is not equivalent to Applicants' claim 9.

Concerning claim 10, there is no teaching in Aslam of the target document data comprising an inline designation attribute, one or more source document key attributes, a query attribute, a database attribute, a cache designation attribute, and a block size attribute. The passage cited by the Office of page 5, column 1, lines 1-3 of Aslam is not equivalent to Applicants' claim 10.

Concerning claim 11, there is no teaching in the Aslam reference of accessing target document data embedded inline in the autolink command. The passage cited by the Office of page 5, column 1, lines 2-3 of Aslam regarding the term "corpora" is not equivalent to Applicants' claim 11.

Concerning claim 12, there is no teaching in the Aslam reference of accessing target document data from a similarity search server by issuing a query command to the similarity search server from the link analysis server. The passage cited by the Office of page 4, column 2, line 7 through page 5, column 1, line 2 of Aslam regarding user inputting free text user queries is not equivalent to Applicants' claim 12.

Concerning claim 13, there is no teaching in the Aslam reference of performing a link analysis for identifying relationships based on a comparison selected from the group consisting of comparing one source document with many target documents, comparing multiple source documents with multiple target documents in different groups, and comparing multiple documents within a group with each other. The passage cited by the Office of page 4, column 2, line 7 through page 5, column 1, line 2 of Aslam regarding user inputting free text user queries is not equivalent to or inherent in Applicants' claim 13.

Concerning claim 14, there is no teaching in the Aslam reference of sending a response selected from the group consisting of sending a response containing an error message, sending a response containing a count of link matches, sending a response containing a count of link matches and source documents, sending a response containing a count of link matches, source documents and document scores that were used in a link match result, and sending a response containing a count of link matches, source documents, document scores and document attribute scores that were used in a link match result. The passages in Aslam cited by the Office are not equivalent to Applicants' claim 14.

Concerning claim 16, there is no teaching in the Aslam reference of a computer-readable medium containing instructions for controlling a computer system according to the software method of claim 1. Contrary to the assertion by the Office, a computer-readable medium containing instructions for controlling a computer system according to the software method of Applicants' claim 1 is not inherent in the computer system of Aslam.

Concerning claim 21, there is no teaching in the Aslam reference of the source document data being accessed from a similarity search server. Contrary to the assertion by the Office, page 4, column 1, lines 7-8 of the Aslam reference discloses a Smart search engine with a cosine normalization weighting scheme. This citation is not equivalent to accessing source document data of Applicants' claim 21.

Concerning claim 22, there is no teaching in the Aslam reference of the target data being accessed from a similarity search server. Contrary to the assertion by the Office, page 4, column 1, lines 7-8 of the Aslam reference discloses a Smart search engine with a cosine normalization weighting scheme. This citation is not equivalent to accessing target document data of Applicants' claim 22.

Concerning claim 24, there is no teaching in the Aslam reference of receiving an autolink command by an input processing section of the link analysis server.

Applicants' claim 24 is not inherent in the Office citation in Aslam of page 5, column 1, lines 1-6. There is no disclosure in the Aslam reference of an autolink command.

Concerning claim 25, there is no teaching in the Aslam reference of accessing the processing profile, the source document data and the target document data by a data

manager section of the link analysis server. There is no disclosure of Applicants' claim 25 in the Office citation in Aslam of page 5, column 1, lines 1-6.

Concerning claim 26, there is no teaching in the Aslam reference of a link analysis engine for performing a link analysis that comprises an engine manager section containing an engine core within the link analysis section. There is no disclosure of Applicants claim 26 in the cited passage of page 5, column 1, lines 6-13 of the Aslam reference.

Concerning claim 27, there is no teaching in the Aslam reference of sending a response by an output section of the link analysis server. There is no disclosure of Applicants claim 27 in the cited passage of page 5, column 1, lines 6-9 of the Aslam reference.

Concerning claim 28, there is no teaching in the Aslam reference of a data persistence section of the link analysis server for storing response results. There is no disclosure of Applicants claim 28 in the cited passage of page 5, column 1, lines 6-9 of the Aslam reference.

Concerning claim 30, there is no teaching in the Aslam reference of a processing profile embedded inline in the autolink command. There is no disclosure of Applicants claim 30 in the cited passage of page 4, column 2, line 7 through page 5, column 1, line of the Aslam reference. Applicants' autolink command or processing profile is not equivalent to a query command, or visa-versa.

Concerning claim 31, there is no teaching in the Aslam reference of target document attributes and associated schema embedded inline in the autolink command. There is

no disclosure of Applicants claim 31 in the cited passage of page 5, column 1, lines 2-3 of the Aslam reference.

Concerning claim 32, there is no teaching in the Aslam reference of source document attributes and associated schema embedded inline in the autolink command. There is no disclosure of Applicants claim 32 in the cited passage of page 5, column 1, lines 2-3 of the Aslam reference.

Concerning claim 33, there is no teaching in the Aslam, Apte or Lam references of locating the target documents and the remote similarity search agents in one or more remote disparate databases, determining similarity search scores between the source documents and the target documents by the remote similarity search agents using measurement and comparison functions, and transmitting the similarity search scores from the one or more remote disparate databases to the similarity search server. There is no disclosure of Applicants claim 33 in the cited passage of page 5, column 1, lines 1-13 of the Aslam reference.

Concerning claim 34, there is no teaching in the Aslam, Apte or Lam references of locating the source documents in the one or more remote disparate databases. There is no disclosure of Applicants claim 34 in the cited passage of page 5, column 1, lines 1-13 of the Aslam reference.

Concerning claim 35, there is no teaching in the Aslam, Apte or Lam references of means for locating the target documents and the remote similarity search agents in one or more remote disparate databases, remote similarity search agents for determining similarity search scores between the source documents and the target documents using measurement and comparison functions, and means for transmitting the similarity

search scores from the one or more remote disparate databases to the similarity search server. There is no disclosure of Applicants claim 35 in the cited passage of page 5, column 1, lines 1-13 of the Aslam reference.

Concerning claim 36, there is no teaching in the Aslam, Apte or Lam references of means for locating the source documents in the one or more remote disparate databases. There is no disclosure of Applicants claim 36 in the cited passage of page 5, column 1, lines 1-13 of the Aslam reference.

Since the references cited by the Office do not teach the limitations of Applicants' dependent claims, the rejections of these dependent claims as being anticipated or obvious are also not supported by the Aslam, Apte and Lam references and should be withdrawn. Applicants' request withdrawal of the rejections, further examination and allowance of these claims.

Applicants contend that, based on the claim amendments, there are patentably distinguishable claimed features between the invention represented by Applicants' claims and the cited reference disclosures of Aslam, Apte and Lam.

SUMMARY

As discussed above, the rejections of claims 1-36, as amended, under 35 U.S.C. §§ 102(b) and 103(a) are not supported by the references cited by the Office.

Reconsideration and further examination are requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is requested that the Examiner telephone Douglas D. Russell, Applicants' Attorney at 512-338-4601 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

17 February 2009 Date /Douglas D. Russell/
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